

# KNOWLEDGE DOMINANCE

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## *See First, Understand First, Act First, And Finish Decisively*

### Introduction

For as long as mankind has waged war, commanders have sought dominant knowledge of the battlespace to defeat their enemies while minimizing their own losses. In the absence of that knowledge, great battle captains relied on an innate ability to take fragments of information about the battlefield and sense the opportunities for their own forces and the vulnerabilities of their adversaries. Still others mastered military history in hopes of applying lessons from the past to their current and planned operations. Desert Storm provided us with a glimpse of the future and represented the first war where technology-enhanced access to information made a decided difference in the outcome of engagements, battles, and the campaign. Superior battlespace knowledge, combined with a highly trained, well-equipped force, enabled coalition commanders to direct their forces with near impunity.

As technology evolved in ways we could not imagine, and we worked to leverage those advances to provide relevant knowledge to commanders at every echelon, the operational environment changed as well. The contemporary global security environment is both complex and ambiguous. Unrest and conflict scenarios range from competition among states to failed states unable to withstand the strains of resource scarcity, population growth, and ethnic and religious militarism.

Our current and potential foes have proven to be knowledgeable and adaptive, and they constantly seek ways to counter, often in an asymmetric fashion, our significant advantages in people, training, and technology. In recognition of this shifting and ambiguous threat, the Army is changing to meet the challenge. The uncertain nature of potential future adver-

saries mandates that the Army have a rapid, decisive capability to respond across the full spectrum of operations, while operating within joint and coalition constructs. The Army will remain the premier land force, optimized for the challenges of the 21st century as it moves toward its future state, the Objective Force.

### Challenges

The principle operational challenge for the Objective Force is the transcendent requirement for early and continuous application of strategic power in all dimensions of the battlespace and in all operations. The Objective Force will respond with trained, disciplined, and expertly led soldiers equipped with highly lethal, leading-edge weapon systems. The force will be enabled by precise knowledge at the point of decision obtained by leveraging expert personnel and advanced information technologies. The Objective Force accepts a reduced level of armor-based protection to gain strategic responsiveness. This risk is mitigated by increased tactical and operational speed, versatility, agility, sustainability, and lethality.

Perhaps the single greatest enabler for the bold vision of the Objective Force is dominant battlespace knowledge. This knowledge will allow the future force to develop the situation without using "movement-to-contact" techniques by engaging opposing forces with beyond-line-of-sight and non-line-of-sight capabilities. In turn, the capabilities will also allow the force to precisely dictate the time and circumstances under which it will conduct close engagement. Recognizing this as both an awesome challenge and a remarkable opportunity, Army intelligence and the entire intelligence, surveillance, and reconnaissance (ISR)

battlefield functional area (BFA) are transforming to meet the challenge and seize the opportunity.

Army intelligence leaders envision an integrated "mud-to-space" Army intelligence team projecting knowledge at the point of decision and empowering the Objective Force to see first, understand first, act first, and finish decisively. Although this vision addresses the full scope of Army transformation (Legacy, Interim, and Objective Forces), this article focuses only on preparations to meet the needs of the Objective Force.

The Army intelligence community is challenging the status quo; seeking better ways of doing business; and looking for advancements across Doctrine, Training, Leader Development, Organization, Materiel and Soldiers-Policy (DTLOMS-P). The bedrock of this transformation is a world-class intelligence team made up of soldiers, Department of the Army civilians, and contractors focused on the needs of commanders at every echelon.

To be mission-capable, the Objective Force must possess integrated knowledge of the battlespace in all dimensions, and the Army intelligence community must contribute significantly to creating unprecedented situational awareness in space and time by reducing the uncertainty and "fog of war." The demands of Objective Force operational concepts create a *de facto* contract with Army intelligence to "get it right" so that no future commander is surprised.

Another vision for Army intelligence transformation is the creation of the "tactical infosphere" for Objective Force commanders, analogous in some respects to a Navy carrier battle group today. As this Navy entity sails the seas, it creates a sphere (subsurface, surface, and aerospace) in which it enjoys an

informational overmatch, precluding surprise and preserving freedom of action. Army intelligence, operating within and integrating the broader construct of the ISR BFA, will be integral to operations as commanders seek to visualize, describe, and direct.

Army intelligence efforts will be directed at translating, orchestrating, and synchronizing the commander's knowledge requirements with operations. This will be accomplished with an adaptively packaged forward intelligence force, including area experts and tailored systems. This force will be capable of reaching from mud to space and to national, joint, and coalition entities (from joint platforms to national-level knowledge centers) for information and knowledge. The intelligence force will also be prepared to gather information to supplement and expand on the significant capabilities of the Future Combat Systems (FCS).

The Army intelligence team will integrate information from all possible sources on the battlefield, across every BFA, including FCS, Comanche, and brilliant weapons. This will be combined with data collected from beyond the range of organic sensors. Enabled by a robust information transport layer, commanders will gain knowledge in a manner tailored to enable decisions. The goal is instantaneous, continuous, near-certain knowledge allowing the Objective Force commander to plan, rehearse, and execute at a speed and certainty that no opponent can match, regardless of the environment.

## Science And Technology

Although this vision of the future relies on broad, sweeping change across DTLOMS-P, our ongoing work in the world of science and technology (S&T) and research, development, and acquisition is a particularly important area for Army intelligence transformation. Relative to S&T, Army intelligence has a unique dual mission. Not only must we seek technological advances to enable our vision, but our skilled, agile team must protect the tremendous investment that the Army is making to realize leap-ahead capabilities for the Objective Force. This demands countering foreign intelligence activities, along with identifying and correcting security vulnerabilities. A cadre of

security, foreign disclosure, and counterintelligence professionals spread throughout the Army are our warriors in this battle, helping commanders assess and mitigate risk from a complex and diverse network of threats. As our education and training programs heighten awareness and our efforts to defeat attempts to gain access to our information continue, we believe that we can preserve the promise of combat overmatch for the Objective Force.

Additionally, Army intelligence efforts must be geared to seeking out those key investment areas that hold the best promise for assuring our ability to deliver the knowledge edge to the Objective Force. Effective S&T is integral to each of the Army intelligence core competencies. Clearly, S&T priorities and energy must focus precisely on modifying or developing technology that can help gather, process, organize, store, and retrieve large amounts of data, information, and knowledge.

Concurrently, we must be able to share information and collaborate with leaders and other knowledge workers. Ultimately, these efforts will support decisionmaking and enhance other actions.

S&T efforts must also focus on presenting and visualizing in ways that complement the individual thinking preferences of commanders and leaders. The dominant challenge for realizing the Army intelligence vision is that of integration, and our efforts must reflect this. It will also be necessary to leverage the S&T investments of our sister Services, the national intelligence community, other governmental agencies, and the cutting-edge S&T programs of the commercial and academic sectors.

## Acquisition

Army intelligence is assuredly "ahead of the curve." By continually assessing the operational environment and conducting thorough, introspective evaluations during the last 10 years, the Army ensured that its key systems are optimized for full-spectrum operations with the Objective Force. In particular, we benefited from the great work of our acquisition community, specifically, the Program Executive Office for Intelligence, Electronic Warfare and Sensors; the Program Executive Office for Command,

Control and Communications Systems; and the Army Space Program Office. Collectively, these offices reduced the number of Army intelligence systems from 19 to 9, increased interoperability, moved to a multi-intelligence capability, used best-business practices to rapidly put advanced capabilities into the hands of soldiers, and ensured that all systems would have roll-on/roll-off capability on C-130-type aircraft. Building on these achievements, we are poised to enable Objective Force success with five key systems which, when combined in an integrated architecture, will help deliver the knowledge edge. These systems are the Aerial Common Sensor; Tactical Unmanned Aerial Vehicle; Prophet (tactical level signals intelligence system); the Distributed Common Ground Station-Army; and our piece of the Army Battle Command System, the All Source Analysis System.

## Conclusion

Army intelligence and the ISR BFA are critical to Objective Force mission success. Furthermore, superior ISR and cutting-edge information operations are integral to the emerging operational tenets of the future Army. The Army intelligence leadership has a bold vision to achieve this challenge. A world-class team, working collaboratively using the most technologically advanced tools available, along with our joint and national partners, are uniting to provide the Objective Force with the knowledge edge. No surprises, no more meeting engagements, lifting the fog of war—Army intelligence is "always out front!"

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